

*Atlas Copco*

# Dry Roots Booster Vacuum Pumps

DRB 250-2000 Series



# Overview

Booster vacuum pumps, also known as Roots vacuum pumps are generally used to increase the pumping speed of a system or with the goal of reaching a lower ultimate vacuum level. Booster pumps are used in a wide range of applications, most commonly used in the rough vacuum range, especially when high pumping speeds and low pressures are required, from atmosphere to  $1 \times 10^{-3}$  mbar. Due to the non-contact rotational design of these pumps, they are able to run at higher speeds, offering increased pumping speeds for the backing pumps. An added advantage is the lower energy consumption as compared to a single backing pump with the same pumping speed.

## A multitude of applications

The most frequent use of the DRB roots vacuum pumps is as an enabler for smaller primary vacuum pumps. They are designed to boost the most demanding requirements for modern vacuum-based production processes. This allows for the compression of large volume flows of gases in the fine vacuum range. Common applications include those where rapid evacuations need to be achieved in the shortest possible cycle times.



### High Speed Packaging

*Skin packaging for food preservation, inert environment in Pharmaceutical Industry and protection of sterile medical devices.*



### Drying & Freeze Drying

*For product dehydration in food industry, Pharmaceutical, Dye and Chemical industry.*



### Vacuum Cooling

*Rapid cooling with vacuum to enhance freshness and shelf life of your specific product like vegetables, fruit, flowers.*



### Industrial Vacuum

*Multiple processes including altitude simulation, gas charging, catalytic convertors, leak testing, heat treatments.*



# Atlas Copco DRB 250-2000 Series

## Simple and smart design for industry

- Integrated by-pass
- Shorter pumping down time for cyclic operation
- Protection against thermal overloading
- Able to switch on at atmospheric pressure with backing pump

## Robust Technology

- Robust pump design
- Long service intervals and simple on-site maintenance

## Energy efficiency & high performances

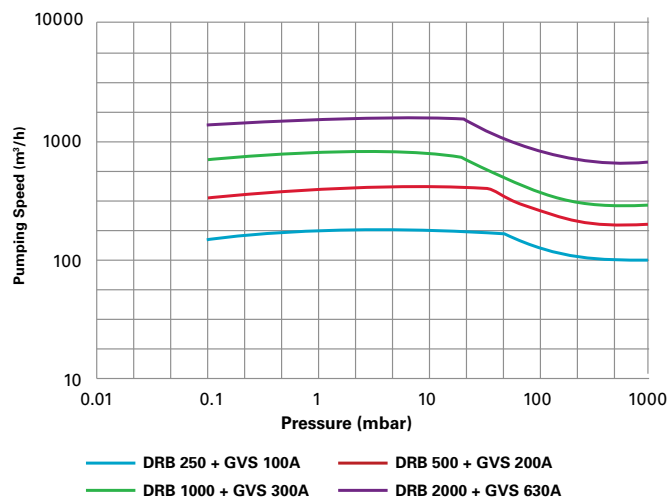
- High pumping speed – range 250–2000 m<sup>3</sup>/h
- High performances IE3 three-phase motor
- Low power consumption and carbon emissions
- Low noise level

## Easy and flexible installation

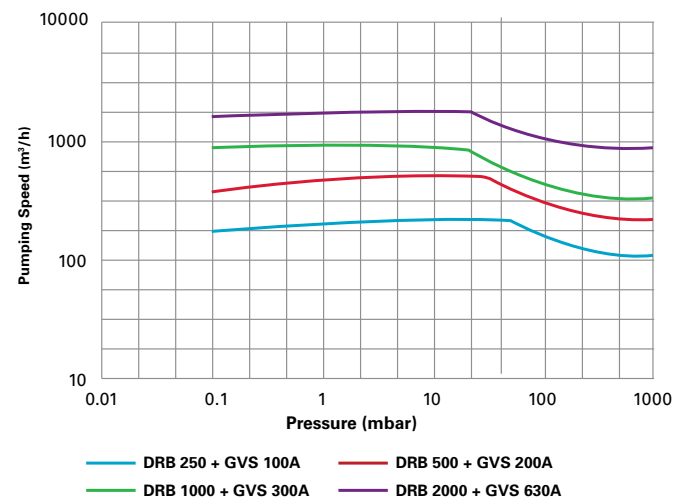
- Air cooled, no utility
- Compact design, easy to integrate into systems
- Easy to implement conversion from vertical to horizontal flow

## Performance Curves

### 50Hz



### 60Hz



# Technical Data

		DRB 250	DRB 500	DRB 1000	DRB 2000
Pumping speed-50Hz	m <sup>3</sup> /hr (cfm)	253 (149)	505 (297)	1000 (589)	2050 (1208)
Pumping speed-60Hz	m <sup>3</sup> /hr (cfm)	304 (179)	606 (357)	1200 (707)	2460 (1449)
Max. permissible pressure differential across pump	mbar (Torr)	80 (60)			50 (38)
Inlet/outlet connection		EN 1092-2-PN6-DN63		EN 1092-2-PN6 -DN100	EN 1092-2-PN6 -DN160
Nominal motor power	kW (hp)	1.1 (1.5)	2.2 (3.0)	4.0 (5.4)	7.5 (10.0)
Dimensions					
- Length	mm (inch)	735 (28.9)	840 (33.1)	1059 (41.7)	1277 (50.3)
- Width	mm (inch)	305 (12.0)	390 (15.4)	494 (19.4)	638 (25.1)
- Height	mm (inch)	300 (11.8)	340 (13.4)	396 (15.6)	530 (20.9)
Weight Net mass	kg (lbs)	94 (207)	142 (313)	254 (560)	452 (997)



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